

Claims

1. A carton paper powder removing apparatus of a paper liquid container packaging and filling machine, which removes paper powder adhered to the inside of a bottomed tubular carton obtained by molding a flat blanks of a carton for paper liquid container to be formed into a solid tubular shape and sealing a bottom part thereof, comprising:

a paper powder removing nozzle reciprocating from an upper opening part of the bottomed tubular carton toward the inside of the carton and having a jetting port at a tip part of the nozzle;

a paper powder return prevention means installed between a nozzle outer wall and a carton inner wall, e.g. between the tip part of the paper powder removing nozzle and a base part; and

a paper powder collecting means installed near the upper opening part of the bottomed tubular carton and having air suction ports disposed above the space between the nozzle outer wall and the carton inner wall in a state of facing oppositely to each other, whereby the paper powder in the carton can be removed.

2. The carton paper powder removing apparatus according to claim 1, comprising a blower for collecting a paper powder removing carrying medium, by which removed paper powder is separated from the paper powder collecting means, and sending the medium thus collected to the paper powder removing nozzle.

3. The carton paper powder removing apparatus according to claim 1, comprising a filter on a flow path between the paper powder collecting means and the blower that separates removed paper powder included in the paper powder removing carrying medium sent from the paper powder collecting means.

4. The carton paper powder removing apparatus according to claim 1, comprising a counter for measuring concentration of removed paper powder included in the paper powder removing carrying medium sent from the paper powder collecting means, on a flow path between the paper powder collecting means and the filter.

5. The carton paper powder removing apparatus according to claim 1, comprising a static electricity removing means near the air jetting port of the paper powder removing nozzle and on an upper stream side of the paper powder removing carrying medium.

6. The carton paper powder removing apparatus according to claim 1, comprising a controller for sending a predetermined control signal to a reciprocating movement drive means of the paper powder removing nozzle and the static electricity removing means and/or the blower, in accordance with an output signal received from the counter.